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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,594	03/09/2001	Frank Kuehnel	00694635	3379

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Robert J Depke
Mayer Brown & Platt
PO Box 2828
Chicago, IL 60690-2828

EXAMINER

GONZALEZ, JULIO C

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 01/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,594

Applicant(s)

KUEHNEL ET AL.

Examiner

Julio C. Gonzalez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 16 in figure 4. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because illustration of the invention is not clearly shown. The sensors are not clearly shown. From figure 2, it seems like if the shaft and the sensor are the same component. The connecting leads and the terminal contacts seem to be the same component. The whole structure of the invention seems to be in pieces, which makes difficult to visualize the scope of the invention. A proposed drawing correction or corrected drawings are required in reply to the Office action to

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avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 7-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant discloses that a disk is placed away from the permanent magnets and that the disk operates with the position sensor, however, the application does not disclose how the disk is connected to the permanent magnet or to the sensor in any way. Is the disk a permanent magnet also or is it magnetize by the permanent magnet? How are the positions magnets placed with respect to the invention? Are the positions magnets been magnetized by the permanent magnet?

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, what is produced, a signal or a magnetic field? How the leads produce the signal?

In claim 10, how is the wire arranged "transversely" with respect to the movement of the rotor?

In claim 11, what is opposite the sensor, the position magnet or the permanent magnet?

What is considered "away"? What distance? Far? Near? Almost near?

In claim 12, how is the disk been magnetized if it is not connected to the permanent magnet nor it seems that the disk gets magnetic flux from the permanent magnet?

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vuillemin et al in view of Sumi et al.

Vuillemin et al discloses an electric motor having a rotor 6, position sensor 14, a current induced by a magnetic field which is sent through the coils (see figure 1).

Moreover, the rotor has position magnets away the permanent magnets (column 2, lines 1, 2) and opposite the position sensor.

However, Vuillemin et al does not disclose explicitly a permanent magnet rotor.

On the other hand, Sumi et al discloses for the purpose of running a motor smoothly and reducing torque ripples, a permanent magnet rotor 46 with away magnets 32 and position sensor 46 (see figure 4A).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a motor as disclosed by Vuillemin et al and to modify the invention by using a permanent magnet rotor for the purpose of running a motor smoothly and reducing torque ripples as disclosed by Sumi et al.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vuillemin et al in view of Sumi et al and Nakamura et al.

Vuillemin et al discloses an electric motor having a rotor 6, position sensor 14, a current induced by a magnetic field which is sent through the coils (see figure 1). Moreover, the rotor has position magnets away the permanent magnets (column 2, lines 1, 2) and opposite the position sensor.

However, Vuillemin et al does not disclose explicitly a permanent magnet rotor.

On the other hand, Sumi et al discloses for the purpose of running a motor smoothly and reducing torque ripples, a permanent magnet rotor 36 with away magnets 32, 34 and position sensor 46 (see figure 4A).

However, neither Vuillemin nor Sumi disclosed a disk.

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On the other hand, Nakamura et al discloses for the purpose of producing a motor that produces high velocities and large output voltage at a high frequency, a disk 3, which is magnetized by the permanent magnet 4.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a motor as disclosed by Vuillemin et al and to modify the invention by using a permanent magnet rotor for the purpose of running a motor smoothly and reducing torque ripples as disclosed by Sumi et al and to use a disk in the motor for the purpose of producing a motor that produces high velocities and large output voltage at a high frequency as disclosed by Nakamura et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

December 21, 2001

Karl Tamai
Patent Examiner
Technology Center 2800

